

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (previously presented) A safety system for an industrial press having a moveable section, the safety system comprising:
 - a laser emitting means for emitting a continuous planar laser beam having a generally constant lateral width;
 - a light receiving means for receiving the laser beam and for detecting when an object intersects the laser beam; and
 - a control means for stopping or preventing a movement of the moveable section of the press when the receiving means detects that the laser beam has intersected an object.

2. (original) A safety system according to claim 1, wherein the industrial press has a blade and an anvil moveable relative to each other, the safety system being locatable such that the planar laser beam is emitted immediately adjacent the leading edge of the blade.

3. (original) A safety system according to claim 2, wherein the plane of the planar laser beam is at least substantially horizontal and is locatable between the blade and anvil of the press brake.

4. (original) A safety system according to claim 2, wherein the plane of the planar laser beam is at least substantially vertical and is locatable in front of the blade.

5. (previously presented) A safety system according to claim 2, wherein the laser emitting means and the light receiving means is mountable on or immediately adjacent the blade, and is movable with the blade when it is the moveable section of the press.

6. (previously presented) A safety system according to claim 1, further comprising a plurality of laser emitting means and associated said light receiving means for emitting a plurality of said planar laser beams.

7. (previously presented) A safety system according to claim 1, wherein the laser emitting means includes a laser emitter for emitting a laser beam, and a lens assembly for varying the configuration of the laser beam into a said planar laser beam of generally planar shape and having a generally constant lateral width.

8. (previously presented) A safety system according to claim 7, wherein the lens assembly includes a cylindrical prism for initially expanding the laser beam into a laser beam having a planar fan shaped configuration, and a converging lens for refocusing the fan shaped laser beam to a planar laser beam having a generally constant lateral width.

9. (original) A safety system according to claim 8, wherein the lens assembly further includes at least one correcting lens provided after the converging lens for straightening the lines of light of the planar laser beam.

10. (original) A safety system according to claim 9, wherein the correcting lens includes a lenticular lens formed from one or more lens sections.

11. (currently amended) A safety system according to claim 9, wherein the correcting means lens includes a lens series having at least one convex and at least one concave lens.

12. (previously presented) A safety system according to claim 7, wherein the light receiving means includes a receiver body, and a plurality of light receivers aligned along a common axis as a light receiver array and located at one end of the receiver body, wherein each light receiver is located at one end of a respective light receiving passage provided through the receiver body.

13. (previously presented) A safety system according to claim 7, wherein the light receiving means includes a receiver body, a plurality of light receivers aligned along a common axis as a light receiver array and located at one end of the receiver body, and a lens provided at the opposing end of the receiver body for focusing the planar laser beam onto the light receivers.

14. (currently amended) A safety system according to claim 13 wherein the lens is a cylindrical lens, the lens focusing the planar laser beam onto the light receivers even when the planar laser beam is displaced laterally from a plane extending through the light receivers.

15. (previously presented) A safety system according to claim 14, wherein the receiver body is an enclosure separated into separate parallel passages by dividing walls.

16. (previously presented) A safety system according to claim 12, wherein the width of the planar laser beam is wider than the length of the light receiver array.

17. (currently amended) A safety system according to claim 12, further including an electronic control unit for receiving control signals from the light receivers and for controlling the operation of the press, wherein the press is stopped when the receipt of the light of the planar laser beam to at least one of the light receivers is blocked due to a breaking of the planar laser beam.

18. (original) A safety system according to claim 17, wherein the light receivers are grouped into a separate sections, with each section of light receivers providing a separate control signal to the electronic control unit.

19. (previously presented) A safety system according to claim 1, wherein both the laser emitting means and the light receiving means are respectively mounted on supports on opposing sides of the moveable section of the press, wherein at least one of the supports is adjustable to allow the alignment and position of at least one of the laser emitting means or the light receiving means to be adjusted.

20. (currently amended) A safety system according to claim 1 [[19]],-wherein only the laser emitting means is adjustable, the light receiving means remaining mounted on a support on one side of the moveable section of the press, such that the support is adjustable to allow the alignment and position of the laser emitting means whilst the laser receiving means remains in a fixed position.

21. (previously presented) A safety system for an industrial press having a moveable section, the safety system comprising:

a laser that emits a continuous planar laser beam having a generally constant lateral width;

a light receiver, aligned with the laser, that receives the laser beam and detects when an object intersects the laser beam; and

a control, in electronic communication with the light receiver, that is capable of stopping or preventing a movement of the moveable section of the press when the light receiver detects that the laser beam has intersected an object.

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PATENT

Amendments to the Drawings

The attached sheets of drawings includes changes to Figures 9A. The first sheet, which includes Figures 8 and 9A, replaces the original sheet including Figures 8 and 9. A new sheet including Figure 9B is enclosed.

Attachment: Replacement Sheet(s)